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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,906	06/28/2001	David A. Jackson	10473.635	1578

20277 7590 07/16/2003
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EXAMINER

COURSON, TANIA C

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/892,906

Applicant(s)

JACKSON ET AL.

Examiner

Tania C. Courson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-8, 11-49, 51-132 and 134-151 is/are pending in the application.
- 4a) Of the above claim(s) 13-16, 27, 40-43 and 54-124 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-8, 11, 12, 26, 53, 125, 128-132, 134, 135 and 151 is/are allowed.
- 6) ☒ Claim(s) 17-25, 28-31, 36-37, 44-49, 51-52, 126-127 and 136-150 is/are rejected.
- 7) ☒ Claim(s) 32-35, 38 and 39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 07 January 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

1. The election requirement stated in an office action (Paper No. 9) is hereby repeated, for the third time, and thus made and maintained **FINAL**.

2. It is acknowledged that the Applicant elected Species I (claims 1-12, 17-26, 28-39 and 44-53) of Group I in Paper No. 11. The examiner further acknowledges that claims 1-4, 10 and 50 were cancelled in Paper No. 13, new claims 125-146 were added in Paper No. 13, claims 9 and 133 were cancelled in Paper No. 17 and new claims 147-151 were added in Paper No. 17.

3. Claims 13-16, 27, 40-43, and 54-124 are maintained withdrawn from further consideration pursuant 37 CFR 1.142(b), as being drawn to a nonelected invention, there being **no allowable generic** or linking claim.

4. Thus, claims 5-8, 11-12, 17-26, 28-39, 44-49, 51-53, 125-132, and 134-151 will be further examined in this action.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 17-25, 126 and 136-145 are rejected under 35 U.S.C. 102(e) as being anticipated by Hendrix (US 6,115,927).

Hendrix discloses in Figs. 2, 6 and 11-14, an automotive measuring device including the following:

With respect to Claims 17 and 136:

- a) a vision imaging system (Fig. 2, touch screen 22), a target system (Fig. 2, measuring system 10) including;
- b) a target body (Fig. 6, probe 18A);
- c) one or more target elements (Fig. 6, emitters 14) disposed on the target body (Fig. 6) and detectable by the position determination system (Fig. 2, computer 20);
- d) a point definer (Fig. 6, conical member 86) extending from the target body, the point definer including a point capable of being located adjacent the position on the vehicle (Fig. 6);
- e) an attachment device (Fig. 12, connector 41) to stabilize the position of the target body relative to the vehicle and the point relative to the position of the vehicle to be located (Fig. 11);
- f) wherein the position determination/vision imaging system is configured to determine a location of the target body after detecting the target elements disposed on the target body (column 5, line 64 through column 6, line 1).

With respect to Claims 18-25, 126 and 137-145:

- a) wherein the attachment device further comprises a receiver to which the point definer is attached and a connector that connects with the vehicle (Fig. 12);
- b) wherein the receiver includes a reference feature (Fig. 12, flat end 84) that defines the position of the attachment device relative to the point on the point definer (Fig. 12);
- c) wherein the connector defines a positional relationship between the position on the vehicle to be located and the reference feature (Fig. 11);
- d) wherein the receiver defines a cylindrical recess into which a portion of the point definer is inserted (Fig. 11);
- e) wherein the receiver includes a reference feature (Fig. 12, flat end 84) that defines the position of the connector relative to the point on the point definer (Fig. 12);
- f) wherein the attachment device is adapted to be attached to a strut of a vehicle (column 4, lines 15-17);
- g) wherein the reference feature and the receiver prevent movement of the point definer relative to the attachment device in three axes (Fig. 11);
- h) wherein the reference feature is a flat plane bounding a portion of the recess (Fig. 12);
- i) further comprising a trigger (Fig. 14, trigger 43) for operating the detection of the target system by the position determination system.

In a broad sense it may be inferred that the point on the point definer of Hendrix is stabilized due to the fact that the conical member 86 is stabilized.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 28-31, 36, 44-49, 51-52, 127 and 146-147 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendrix in view of Jackson (US 5,724,743), van den Bossche (US 6,279,246 B1) and Anderson (US 4,726,122).

Hendrix discloses in Figs. 2, 6 and 11-14, an automotive measuring device including the following:

With respect to claim 28 and 146:

- a) a target system means (Fig. 2, measuring system 10) including a target body means (Fig. 6, probe18A);
- b) at least two visually perceptible target elements means (Fig. 6, emitters 14) disposed on the target body means (Fig. 6);

- c) a point definer means (Fig. 6, conical member 86) extending from the target body means, the point definer including a point means capable of being located adjacent the position on the object (Fig. 6);

With respect to claims 29-31:

- a) wherein the point on the point definer is at a known location with respect to the target body (Fig. 6);
- b) wherein the point is at a distal end of the point definer (Fig. 6);
- c) wherein the point is at the vertex of a conical projection at the distal end of the point definer (Fig. 12);

With respect to claim 36:

- a) further comprising a trigger (Fig. 14, trigger 43) for operating the detection of the target system by the position determination system;

With respect to claims 44-49, 51-52, 127 and 147:

- a) wherein the object is a vehicle (Fig. 11);
- b) further comprising an attachment device (Fig. 12, connector 44) to stabilize the position of the target body relative to the vehicle and the point on the point definer relative to the position of the vehicle to be located (Fig. 11);
- c) wherein the attachment device further comprises a receiver to which the point definer is attached and a connector that connects with the vehicle (Fig. 12);

- d) wherein the receiver includes a reference feature (Fig. 12, flat end 84) that defines the position of the attachment device relative to the point on the point definer (Fig. 12);
- e) wherein the connector defines a positional relationship between the position on the vehicle to be located and the reference feature (Fig. 11);
- f) wherein the receiver defines a cylindrical recess into which a portion of the point definer is inserted (Fig. 11);
- g) wherein the attachment device is adapted to be attached to a strut of a vehicle (column 4, lines 15-17);
- h) wherein the reference feature and the receiver prevent movement of the point definer relative to the attachment device in three axes (Fig. 11);
- i) wherein the reference feature is a flat plane bounding a portion of the recess (Fig. 12);
- j) wherein the receiver includes a reference feature (Fig. 12, flat end 84) that defines the position of the connector relative to the point on the point definer (Fig. 12).

Hendrix does not disclose at least two visually perceptible target elements disposed on a target body in a two dimensional array configuration, a handle extending from a target body, positioned and configured to prevent target elements from being visually obscured when held by a user, and a vision imaging system means configured to acquire an image of the target body means to generate image information describing geometric characteristics and positional

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interrelationships of the target elements means disposed on the target body means imaged, and to relate such image information to predetermined reference information describing known geometric characteristics and positional interrelationships of the target elements means to determine a location and angular orientation of the target body means.

Van den Bossche teaches a device for determining the position of a point that consists of at least two visually perceptible target elements disposed on a target body in a two dimensional array configuration (Fig. 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the automotive measuring device of Hendrix, so as to include target elements in a two dimensional array, as taught by van den Boscche, in order to provide to enhanced the number of target elements in order to avoid angular deviations during use of the device.

Anderson teaches a device for wheel alignment that consists of a handle (Fig. 2, handle 21) extending from a target body, positioned and configured to prevent target elements from being visually obscured when held by a user (Fig. 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the automotive measuring device of Hendrix, so as to include a handle, as taught by Anderson, in order to facilitate moving the target body in order for it to be positioned in arbitrary angular relationships relative to the target during use of the device.

Jackson '743 teaches an apparatus for determining the alignment of motor vehicle wheels that consists of a vision imaging system means configured to acquire an image of the target body means to generate image information describing geometric characteristics and positional interrelationships of the target elements means disposed on the target body means imaged, and to relate such image information to predetermined reference information describing known geometric characteristics and positional interrelationships of the target elements means to determine a location and angular orientation of the target body means (column 9, line 41 through column 10, line 61). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the automotive measuring device of Hendrix, so as to replace the vision imaging system of Hendrix with the measuring system of Jackson '743, because both are well known alternate types of aligning systems which will perform the same function, if one is replaced with the other, of providing alignment information.

9. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hendrix, Jackson '743, van den Bossche and Anderson, as applied to claims 28-31, 36, 44-49, 51-52, 127, and 146-147, as stated above, and further in view of Strege et al.

Hendrix, Jackson '743, van den Bossche and Anderson disclose an automotive measuring device as stated above in paragraph 8. They do not disclose a trigger which is positioned on a target body.

Strege et al. teach an electronic measuring gauge for wheel alignment that consists of a trigger (Fig. 3, button E) which is positioned on a target body (Fig. 3, device 12). Therefore, it

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would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the automotive measuring device of Hendrix, Jackson '743, van den Bossche and Anderson, so as to include a trigger which is positioned on a target body, as taught by Strege et al., so as to reduce the time and skill required to make vehicle measurements (column 2, lines 34-36).

10. Claims 148-150 are rejected under 35 U.S.C. 103(a) as being unpatentable over van den Bossche in view of Anderson.

Van den Bossche discloses in Figs. 1-2, a device for determining the position of a point including the following:

With respect to claims 148-149:

- a) a vision imaging system (column 1, line 64-67);
- b) a target system including a target body (Fig. 2, holder 1);
- c) at least two target elements (Fig. 2, reference points 2-4) disposed on the target body in a two dimensional array configuration (Fig. 2);
- d) a point definer (Fig. 2, measuring pin 5) extending from the target body, the point definer including a point (Fig. 2, measuring point 6) capable of being located adjacent the position on the object (Fig. 2);
- e) wherein the position determination system is configured to determine a location of the target body after detecting the target elements disposed on the target body (column 2, lines 32-46).

Van den Bossche does not disclose a handle extending from a target body, positioned and configured to prevent target elements from being visually obscured when held by a user and wherein the object is a vehicle and the position determination system determines the location of a position on a vehicle.

Anderson teaches a device for wheel alignment that consists of a handle (Fig. 2, handle 21) extending from a target body, positioned and configured to prevent target elements from being visually obscured when held by a user (Fig. 2) and wherein the object is a vehicle and the position determination system determines the location of a position on a vehicle (Fig. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the device for determining the position of a point of van den Bossche, so as to include a handle and wherein the object is a vehicle, as taught by Anderson, in order to facilitate moving the target body in order for it to be positioned in arbitrary angular relationships relative to the target during use of the device and so as to replace van den Bossche's object with the vehicle as an object, as taught by Anderson, because both are well known alternate types of objects which will perform the same function, if one is replaced with the other, of providing a location for the target body to detect and measure.

Allowable Subject Matter

11. Claims 32-35 and 38-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. Claims 5-8, 11-12, 26, 53, 125, 128-132, 134-135 and 151 are allowed.

Response to Arguments

13. Applicant's arguments filed on 17 June 2003 have been fully considered but they are not persuasive.

14. In response to applicant's argument in reference to the point not being stabilized in the Hendrix reference, in a broad sense it may be inferred that the point on the point definer of Hendrix is stabilized due to the fact that the conical member 86 is stabilized.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tania C. Courson whose telephone number is (703) 305-3031. The examiner can normally be reached on Monday-Friday from 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez, can be reached on (703) 308-3875. The fax number for this Organization where this application or proceeding is assigned is (703) 308-7724.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



DIEGO F.F. GUTIERREZ
SUPERVISORY PATENT EXAMINER
GROUP ART UNIT 2859

TCC
July 14, 2003